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Bajaj Auto

BALNostix Android Mobile Application Usage Guidelines

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Functional Description

Bajaj Auto Limited (hereinafter referred to as BAL) has in-house developed Android mobile application to flash application software of controllers on Chetak EV.

This tool works only with controllers with BAL vehicles. This document provides usage guidelines for BALNostix android mobile application and is intended to be shared only with recipients as mentioned in this document.

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1. Introduction

This document captures Pro-pack Enabling feature for electric 2 Wheelers with the help of aftermarket BALNostix+ diagnostics app

Any deviation requires the approval of BAJAJ and shall be documented within the corresponding ECU specification.

2. Pre-requisites

UI Development

1. In the special function there should be a button to pro-pack enable
2. On click of it new Activity will start with 2 button and 1 edit text
3. In the Edit text user can enter the OTP 1st button to start the camera so user can scan the qr code
4. once input is successfully taken then user will click on 2nd button to enable it.
5. Pass these info along with ecu record to library
6. Show the progress bar to user and block him on the screen disabling back button
7. Once lib will notify the success message the show a success or fail message
8. After reading message user can dismiss the message

BalbtDongleLib Development

1. take the scan input, otp and ecu record from ui and process it by passing this input to the
2. process the halfsip algo function in lib which take care of all pre-process as well and get the desired output
3. then pass this to vehicle using Write service
4. on success full write service pass the success message to user

Web Api and UI

1. VNSM UI Web page of Dev, UAT and Production server so user get the OTP
2. Api to fetch the details of scanQRcodeData and otp based on vin last 6Char of LFSR

Question

1. can user try for multiple attempt, in success or fail cases?
2. if in case of successfully enabled can we read and show to user the service active?
3. What are the possible fail reason we need to display to user?
4. is there any validation logic for input?
5. Which security level of clearance is needed L3 Or L5?
6. Any pre-condition or post condition need to check or send to controller
7. What is the request and response id, in which controller this option we will give as per doc VCU
8. If its plain write then can we place this in write parameter in that case user can enter only no scan.
9. Can we use UDS 22 service for 8767 response to check propack status ? i.e. 0x55 is enabled else not
10. Can we enable-disable the pro-pack, while vcu replacement?

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UI Development

1. In the special function there should be a button show with Name EEPROM DUMP
2. On click of it new Activity will start with 1 button and 1 textView
3. Pass these info along with ecu record to library
4. Show the progress bar to user and block him on the screen disabling back button
5. Once lib will notify the success message the show a success or fail message

After reading message user can dismiss the message

Balbt dongleLib Development

5. take the scan input, otp and ecu record from ui and process it by passing this input to the
6. process the halfsip algo function in lib which take care of all pre-process as well and get the desired output
7. then pass this to vehicle using Write service
8. on success full write service pass the success message to user

Web Api and UI

3. Api to upload the dump file on server like Dev, UAT and Production with details like the dump file, VIN , ECU , Timestamp and status option new file is availbe
4. Api to fetch the details of Dump file with all the details mentioned above.
5. Provide option to download and delete with multi-selection enabled
6. Api to download the file and on successful download delete the file and update the status

Above two button will be shown in VCU only

Read Battery Cells only for the BMS 3W

UI Development

1. In the special function there should be a button show with Name Read Battery Cells
2. On click of it new Activity will start with 7 textView with Cell1 to Cell7
3. Pass these info along with ecu record to library
4. Show the progress bar to user and block him on the screen disabling back button
5. Once lib will notify the success message the show a success or fail message

After reading message user can dismiss the message

3. Guideline

Screenshot will be added after development which will be share to vendor for UI development.

4. Flow Diagram

